

DOCUMENT RESUME

ED 189 345

CE 025 714

AUTHOR Mook, Corena: Legg, Marilyn
TITLE Project: Strategies for Sex Fairness. Guidance Tests--Usage Despite Bias.
INSTITUTION Kansas State Univ., Manhattan. Coll. of Education.
SPONS AGENCY Kansas State Dept. of Education, Topeka. Div. of Vocational Education.
NOTE 19p.: Not available in paper copy due to colored paper. For related documents see CE 025 705-706 (student instructional packets): CE 025 707-717 and CE 025 719-722 (inservice packets); and CE 025 729 (outreach packet). Not all packets in this series are in ERIC: for full listing available from the publisher see any packet.
AVAILABLE FROM Dr. Frank Slapar, Director, Kansas Curriculum Materials Dissemination Center, 207 Whitesitt Hall, Pittsburg State University, Pittsburg, KS 66762 (\$1.50 per packet; \$45.00 for set of thirty).
EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Inservice Teacher Education; *Interest Inventories; Lesson Plans; Postsecondary Education; Secondary Education; *Sex Fairness; *Sex Stereotypes; *Test Bias; Vocational Interests
IDENTIFIERS Education Amendments 1972

ABSTRACT

One of a series of instructional packets to aid schools in reducing sex stereotypes, this inservice guide for use with school personnel is designed to reiterate the necessity for careful examination and evaluation of testing materials to determine the degree to which they are free of sexual discrimination, bias, and stereotyping. The applicable section of Title IX (Education Amendments of 1972) is presented, and commonly-used types of tests are discussed. Contents include a leader's script (material to be presented), one transparency master and two handout masters. Topics covered include uses and abuses of guidance tests (achievement, aptitude, and interest tests), recommendations for use of career interest inventories, and guidelines for assessment of sex bias in career interest inventories. The packet is designed for use alone, in combination with other packets (see Note), or to supplement existing inservice units. (JT)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED189345

PROJECT: STRATEGIES FOR SEX FAIRNESS
College of Education
Kansas State University

GUIDANCE TESTS - USAGE DESPITE BIAS

A Vocational Education SPECIAL PROJECT
Kansas State Department of Education

CE025 714

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Corena Mook

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Project: Strategies for Sex Fairness
College of Education, Kansas State University

SEX FAIRNESS PACKETS

PRICE PER PACKET \$1.50

The packets are designed to aid Kansas schools in reducing limitations that sex stereotyping imposes on option choices for boy and girl students. Each packet incorporates affective with cognitive learning to facilitate thinking and discussion. A packet's material can be used alone, in combination with other packets, or to supplement existing instructional/in-service/out-reach units. Included are complete instructions for using the enclosed script, visual aids, transparency masters, handout masters, or group activities to cover 40-50 minute time periods. Packets are available for schools to address three different fronts - instructional packets for use with junior high or older students, in-service packets for use with school personnel, and out-reach packets for use with community groups.

INSTRUCTIONAL PACKETS:

'Does Occupational Stereotyping Need to Limit Choice?'

Students think through the process of narrowing their occupational options to a choice pool that reflects their interests, abilities, and values. Consideration is given whether occupational stereotyping is a valid reason for removing occupations from one's choice pool.

'Focus on the Future: Changing Lives'

Students are encouraged to think about today's world and the increased flexibility being prepared for both a job and managing a home brings to future choices.

'What Would I Do If That Were I'

Students consider present or potential life situations to explore traditional and nontraditional alternatives. The purpose is to assist in values clarification regarding sex roles.

'My Legal Right - Expanding Male Options'

Students demonstrate the legal right men have to be hired in nontraditional occupations via skit form.

'My Legal Right - Expanding Female Options'

Students demonstrate the legal right women have to be hired in nontraditional occupations via skit form.

'Is My Textbook Limiting Me in Considering Future Roles?'

Students consider that today's world is changing so rapidly textbooks cannot keep up in reflecting society. By recognizing textbook bias that limits choices, students can choose to ignore these limitations.

'Is My Guidance Text Limiting Me in Considering Future Roles?'

Students explore if and how interest inventories limit consideration of occupational options for boys and girls.

IN-SERVICE PACKETS:

'Changing Lives: Future Trends'

Considers the rapidly changing society and expanded skills and resources students need to acquire and face the future.

'My Role as a Change Agent'

Gives the theoretical base that can guide school personnel in creating attitudinal changes in other people.

'My School's Role as a Change Agent'

Explores how institutions can create attitudinal change in its surrounding environment.

'Legislation's Push for Sex Fairness'

Reviews legislation affecting schools and interpreted implications.

'Recognizing My Fair and Unfair Behavior'

Explores how our biases govern our attitudes and actions toward others. Biases are then examined to select those we want to remove/keep in our internal valuing system.

'Evaluating Our School for Sex Fairness'

Discussion of the process a school undergoes in establishing an evaluation that reflects its environmental circumstances.

'Instructional Material - Usage Despite Bias'

Explores how bias can occur in instructional material and methods of counteracting its influence on students.

'Guidance Tests - Usage Despite Bias'

Explores how bias can occur in guidance tests and approaches to reduce any bias during usage.

'The Academic Teacher - Encouraging Non-Traditional Options'

Considers the role academic teachers can take in expanding options for students.

'Vocational Teacher - Encouraging Non-Traditional Options'

Suggests steps vocational teachers can take that makes students less hesitant to consider non-traditional options.

'Counselor - Encouraging Non-Traditional Options'

Presents several different approaches with suggested accompanying activities from which counselors can choose for encouraging students to consider nontraditional careers.

'Creating a Sex-Fair School Environment'

Explores diverse fronts to be considered and action planning stages for a school.

'Differences Between a Girl and Boy?'

Presents what current research shows may be differences by developmental stages.

'Profile of a Non-Traditional Student'

Written by an educational director in industry who relates the problems he observes women face personally and professionally when working in a non-traditional field. Recommendations are made for improving preparation for non-traditional students.

'Home Economics for All'

Suggest approaches that encourage boys/girls to acquire home management skills and consider home economics related occupations.

'Math and Science for All'

Suggest approaches that encourage girls/boys to acquire sufficient math and science skills that occupational options can remain open.

OUT-REACH PACKETS

'Future Trends Create Changing Lives'

Considers the rapidly changing society and expanded skills and resources today's youth need to cope with the future.

'Society's Messages to Youth'

Explores messages coming from diverse sources of a child's environment and how they can limit options a child considers.

'Community Groups-Helping Face the Future'

Considers alternative approaches community groups can take to aid in expanding option choices for today's youth.

'Business and Industry-Helping Face the Future'

Considers alternative measures that business and industry can take to aid schools expand option choices for their students.

'Parents-Helping Your Child Face the Future'

Explores the role parents can play in limiting or expanding option choices for their children.

'New Options in Choosing Vocational Training'

Developed for use with groups of potential students to encourage both boys and girls to consider all course offerings of a school.

'Re-entering the Work Force-New Options'

Developed for use with older groups of potential students or displaced homemakers to encourage considerations of expanded occupational choices.

INSTRUCTIONS

This packet has been designed to reiterate the necessity for careful examination and evaluation of testing materials to determine the degree to which such instruments are free of sexual discrimination, bias, and stereotyping. The applicable section of Title IX is presented, and commonly-used types of tests are discussed; an accompanying handout summarizes the NIE Guidelines for using tests even if the forms used still contain built-in biases.

This in-service packet may be used alone, in combination with other packets, or to supplement other in-service activities. Its purpose is primarily informational, but group discussion may be encouraged at the discretion of the presenter at any point in the presentation.

Included in the packet are:

1. A Leader's script. This script has action guide notations in the right-hand column. A resource page is included with the Leader's script.
2. A transparency master:

- . Uses and Abuses of Guidance Tests

By covering the master with a sheet of transparency film and running both the sheet and master through a Thermafax machine, a transparency for use with an overhead projector can be produced.

3. Two handout masters:

- . Summary of Recommendations for the Use of Career Interest Inventories
- . Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories

Copies of these handouts for distribution can be made by using any copying machine or by using a Thermafax machine to make a ditto master.

A suggested general format for this in-service unit is:

1. Before the presentation the leader should
 - a. become familiar with the script through pre-reading, making modifications to fit your audience and speaking style;
 - b. set up an overhead projector.
2. The leader reads the script to the group, incorporating the action guide notations in the right-hand column when appropriate.

LEADER'S SCRIPT

The whole area of standardized testing in American public education has been under fire from all directions in recent years--and with good reason.

Originally the old "IQ tests" were intended to determine the intelligence level of children in our schools as a means of helping teachers to help students. As happens with a lot of basically good ideas, it didn't quite work out. The IQ score became another label to apply to a child, often influencing teachers, parents, and children themselves to accept that label and adjust their expectations accordingly. Studies showed that teachers who knew students' IQ scores sometimes evaluated according to the children's "potential." Interestingly enough, even when false scores were given to teachers, some of them still used the scores as a basis for judgment, rather than the students' actual performance. Their attitude and expectations for these students were affected by being told "test scores."

What happened in such experimental, controlled situations is predictable. Treat kids as though they can't learn, and they don't learn. Treat them as though you have high expectations and assume their ability to master certain ideas, and they often will--even if their low IQ scores have been "doctored" to appear higher.*

Eventually it began to become apparent that many students weren't scoring as high on these IQ tests as might be expected by teachers who found that they certainly were doing well enough in class. Upon closer scrutiny, it became obvious that many of these carefully-designed tests depended upon verbal skills which many children, for a variety of reasons, simply had not mastered. The tests were, in essence, discriminating against some minority groups and culturally-deprived youngsters.

*One such study is related in Pygmalion in the Classroom, R. Rosenthal and L. Jacobson. New York: Holt, Rinehart and Winston, Ind., 1968.

The verbally-oriented tests were altered, re-designed, and supplemented by a variety of other kinds of tests. Aptitude tests and interest tests proliferated--again, with the best of intentions. Using them in conjunction with educational achievement tests, counselors and other school personnel attempted to interpret the whole battery of tests administered to each child throughout the school years. The resulting individual profile could then be used as a counseling device to assist in pointing each child in the right direction upon emergence into the "real world" after leaving the public school system. Should a student be advised to go on to college, with any expectation of success in academic studies? Would some other form of training better equip her/him for a future career, such as a vocational/technical school? Would an apprenticeship, or even a co-op program while still in school, best fit the individual needs? Should youngsters with certain abilities and skills be funneled toward certain occupations, while others with similar interests and performance levels were tracked in different directions?

In short, the latter is what has been happening consistently--the "others" being (you guessed it) women! The last great frontier of inequity in educational testing and counseling is a sexual one. --And it should go without saying that any measurement instruments that are unfair to women are also limiting to men.

We will not enter into philosophical considerations of the pros and cons of guidance testing, but accept for now the situation as it currently exists. ---***---

(LEADER: READ ALOUD THE POINTS ON THIS TRANSPARENCY. IF YOU WISH, ENCOURAGE COMMENT AND DISCUSSION OF EACH ITEM.)

Besides its many other ramifications, Title IX of the Education Amendments Act of 1972 specifically requires that tests and materials used by counselors and teachers in guidance must be sexually non-

Show
Transparency
#1: "Uses
and Abuses
of
Guidance
Tests"

discriminatory. One section of the Act pertains directly to the sex-fair use of guidance testing materials, including achievement, interest, and aptitude tests:

....A recipient (of federal funding) which uses testing or other materials for appraising or counseling students shall not use different materials for students on the basis of their sex or use materials which permit or require different treatment of students on such basis unless such different materials cover the same occupations and interest areas and the use of such materials is shown to be essential to eliminate sex bias. Recipients shall develop and use internal procedures for ensuring that such materials do not discriminate on the basis of sex. Where the use of counseling, tests, or other instruments in a substantially disproportionate number of members of one sex in any particular course of study or classification, the recipient shall take such action as is necessary to assure itself that such disproportion is not the result of discrimination in the instrument or the applications.

We are mandated, then, to take all possible steps to examine any and all forms of measurement tests administered to students to assure that they are free of sex bias, both in the actual items appearing on the test and in the materials provided by the publisher for interpretation of the test scores. Policy-makers must be aware that there will be a time-lag before test results for boys and for girls tend to equalize, because of differential experiences prior to the test which may serve to reinforce existing stereotypes concerning skills of females and males, thus influencing students' responses to the test items. Until there is across-the-board sex equity in our public school system, from primary grades on, test scores will reflect in part the pre-existing molding experiences which have exerted influence on the students taking the tests.

Meanwhile, currently available and commonly-used tests are being studied to assess and evaluate them for sex-fairness. On what levels are they examined?

ACHIEVEMENT TESTS

Without getting into the finer points of determining content and construct validity, we can point out, in general, the levels at which achievement tests can be examined by prospective users:

Review the test items for overt sexism. (Use of language: "he" for doctors, scientists, engineers, mathematicians; "she" for nurses, librarians, elementary teachers; or assumptions that certain latent traits are female and others are male; etc.)

Examine the item analysis data and decision rules for selecting items in manuals provided by test publishers.

Where there are mean sex differences in performances on educational achievement tests, review panels need to check whether the publisher has provided evidence to support the construct validity of the tests.

Teachers, counselors, and administrators should attend in-service courses for information about ensuring sex-fairness in presentation and interpretation of test scores.

INTEREST INVENTORIES

Until very recently, both the Strong Vocational Interest Blanks for men and women and the Kuder Occupational Interest Survey reported a separate set of occupational scales to females and males. In the 1970's professional pressures encouraged some changes in the old forms of these tests, which were based on separate occupational scales for men and women. The former test has been re-designed as the Strong-Campbell Interest Inventory. Both these tests retain built-in sex biases, however, as their "updating" consisted of developing new occupational scales limited to items already in the item pool. Both scales (male and female) therefore need to be considered in interpreting test results for the individual student.

An experimental form of the ACT (American College Testing program), The Unisex Interest Inventory--or Uni II--was constructed, using newly-

written sex-balanced items (i.e., items likely to exhibit 10% or less difference in "like" responses between the sexes.) In this particular test form, the sex-balanced scales were found to be generally valid, as measured against the ACT IV, from which Uni II was derived.

These points, then, should be considered by prospective users of interest inventories:

Teachers and counselors need to explore the differences between the male and female scales and norms reported to individuals.

Students in counseling and test score interpretation sessions should be given an explanation of how they rank with others of their own sex exposed to similar socialization, and how they rank with individuals of the opposite sex, in order to maximize their options in career choices.

Counselors should use the test results of career-interest inventories primarily to stimulate students to explore their options, rather than to predict occupational entry and satisfaction. (The current emphasis is to assist women--and men, too--to explore other than traditional views of occupations.)

Counselors must guard against their own possible biases in discouraging student exploration of the total range of career options, indicated by their interest scores. Perhaps counselors should tape some of their sessions with students and play them back later, to evaluate their own sex-fairness.

This handout provides a procedural guide for the use of career interest inventories. ---***---

Distribute
Handout
#1.

APTITUDE TESTS

Aptitude tests, such as the DAT and the FACT, are intended to help students see their strengths and weaknesses in certain abilities, in order to assist them in planning their studies and in thinking about a future career. Aptitude is defined as the "capacity to learn," with aptitudes examined with a view to predicting future success. It is vital to consider aptitudes as the result of interaction of heredity and environment, if these tests are to have any validity. Children may be born with certain limitations on their capacity to learn in certain areas; however, the social environment in which they are brought up will have great impact on

the development of innate capacities to greater or lesser degrees. Aptitude scores, for instance, may tell us that girls, over all, show less aptitude for math and science than do boys, over all. But does this mean they have less innate aptitude, or that they have received less exposure to and less encouragement in developing those abilities in the cultural environment in which they have grown up? In short, the same "adverse impact" criterion used for some minorities in assessing their aptitudes could also be applied to women, in regard to some areas of aptitude testing (such as "mechanical experiences," "spatial experiences," "mathematics experiences.")

In order to make the most meaningful use of aptitude test results, prospective users should apply the following considerations:

Examine the tests and apply the same standards for sex fairness used for evaluating achievement tests and interest inventories.

In addition, the test user should maintain records that provide information concerning the background of the individual being tested--the family environment, educational experiences, personal traits and characteristics, extracurricular experiences--all of which may furnish clues that indicate why a particular pattern of aptitudes has emerged, and whether the pattern might be altered if interest and desire are strong enough.

The National Institute of Education has developed a detailed and explicit set of Guidelines for Assessment of Sex Bias and Sex-Fairness in Career-Interest Inventories. ---***--- This handout is a summary of those guidelines.* In devising them, the following working definition of "sex bias" was used;

Within the context of career guidance, sex bias is defined as any factor that might influence a person to limit - or might cause others to limit - his or her consideration of a career solely on the basis of gender.

* Pp. 28-29 of #4 on Resources page.

Distribute
Handout #2.

After you study these guidelines for interest inventories carefully, it becomes apparent that many of the points may be applied as well to other types of standardized tests as you examine and evaluate them for sex fairness.

As you work with students in interpreting for them the profiles which emerge from the batteries of standardized tests to which they are subjected, remember that these are separate and distinct human beings with whom you are working. You may be exerting greater influence over them than you realize. For many of them, choices which they make about their future lives may be a direct result of your advice.

There is a rather cynical statement: "Statistics don't lie, but statisticians do." Guidance personnel, like statisticians, play an interpretive - even a manipulative - role in working with facts and figures in the form of test scores. As dedicated professionals, make every effort to ensure that you are not manipulating your students into a narrow range of career choices, limited in part by the sex to which they happened to be born. Instead, use all instruments and materials available to you to help them be all they can be - to explore their ever-expanding options.

RESOURCES

The following materials were surveyed in the preparation of this packet:

1. Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories. ERIC report, ED 098 314; National Institute of Education (DHEW), Washington, D.C. 20202. July, 1974.
2. Project BORN FREE, L. Sunny Hansen, Director, et.al. Counseling and Student Personnel Psychology; Department of Psychoeducational Studies, College of Education, University of Minnesota, Minneapolis, MN 55455. August, 1977.
3. Sex Discrimination in Guidance and Counseling - Annotations, Vol. II, Michele Harway et. al. ERIC report, ED 132 500; National Center for Education Statistics (DHEW), Washington, D.C. 20202. February, 1976.
- *4. Sex Bias in Testing: A Review with Policy Recommendations, Carol Kehr Tittle. ERIC Clearinghouse on Tests, Measurement, and Evaluation; Educational Testing Service, Princeton, NJ 08540. 1978.

*As the most recent publication, this report distributed through WEECN (Women's Education Equity Network) provides much of the information presented in this packet.
5. Implementing Title IX and Attaining Sex Equity - Application Materials for Counselors. ERIC report, ED 155 506; Council of Chief State School Officers, Suite 701/1201 16th Street N.W., Washington, D.C. 20036.
6. Workshop in Providing Equal Career Opportunities, Donna Cubit-Swoyer. ERIC report, ED 740 061; Curriculum Laboratory, Vocational-Technical Education Dept., Building 4103 - Kilmer Campus, Rutgers University, New Brunswick, NJ. June, 1977.

TRANSPARENCY MASTER

USES AND ABUSES OF GUIDANCE TESTS

1. Achievement, aptitude, and interest tests are widely used throughout our public schools.
2. Teachers, counselors, administrators, parents, and students themselves place great faith in the results of these tests.
3. The profiles resulting from these tests are used in predicting academic success and for vocational guidance and counseling.
4. Such guidance materials often phrase specific items and interpretation materials in such a way as to suggest that some courses of study or some careers are "for boys" and others are "for girls."
5. Some counselors interpret test results differently for boys and for girls.
6. Boys and girls may be pointed in certain directions vocationally as a result of these tests, with options limited on the basis of sex, rather than interests and abilities.

HANDOUT MASTERS

Handout #1

SUMMARY OF RECOMMENDATIONS FOR THE USE OF CAREER INTEREST INVENTORIES*

Administering the Inventory

1. Use inventories as part of a total career guidance program.
2. Use a combined inventory form.

Reporting Inventory Results

3. Report scores based on both female and male scores.
 - a. Focus on same-sex scales.
 - b. Focus on pattern, not level of scores on opposite-sex scales.
 - c. Avoid spurious scores on opposite-sex scales.
4. Report scores based on both female and male norm groups.
5. Fill in the appropriate sex code.
6. Report scores based on special norm groups.

Interpreting Inventory Results

7. Identify broad interest areas.
8. Identify all occupations with a broad interest area.
9. Orient clients (students) to the potential influence of sex bias on inventory results.
10. Interpret results for special groups carefully.
11. Use all available information.
12. Stimulate exploration.

*Source:

Linda B. Stebbins, Nancy L. Ames, and Ilana Rhodes, Sex Fairness in Career Guidance. Cambridge, Massachusetts: Abt Associates, 1975.

Handout #2
GUIDELINES FOR ASSESSMENT OF SEX BIAS
AND SEX FAIRNESS IN CAREER INTEREST INVENTORIES*

1. The Inventory Itself

- a. The same form should be used for women and men unless it is empirically shown that separate forms minimize bias.
- b. Scores should be given on all occupations and interest areas for both women and men.
- c. Item pools at the inventory and scale levels should reflect experiences and activities equally familiar to each sex.
- d. Occupational titles should be familiar.
- e. Use of the generic "he" should be eliminated.

2. Technical Information

- a. Technical manuals should describe how the inventory meets these guidelines.
- b. The rationale for separate scales should be given.
- c. The same vocational areas should be indicated for each sex even if it is empirically demonstrated that separate inventory forms are more effective in minimizing sex bias.
- d. Sex composition of the criterion and norm groups should be described.
- e. Criterion and norm data should be updated every five years.
- f. The information on career options distributions suggested for each sex should be provided.
- g. The validity of interest inventories for minority groups should be investigated.

3. Interpretive Information

- a. Interpretive materials should point out that vocational interests and choices of women and men are influenced by many environmental and cultural factors, including early socialization, sex-role expectations, and home-versus-career conflict.
- b. Orientation to the inventory should encourage respondents to examine stereotypic sets toward activities and occupations.
- c. The users' manual should state that all jobs are appropriate for qualified persons of either sex and should attempt to dispel myths about women and men based on sex-role stereotypes.
- d. Interpretive materials should encourage exploratory experiences in areas where interests have not had a chance to develop.
- e. Case studies and examples should represent men and women equally and include examples of each in non-stereotypic roles.